Nanoscale Materials Stewardship Program Update

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Nanoscale Materials (NMs)

- Chemical substances as defined by the Toxic Substances Control Act (TSCA)
- NMs not on the TSCA Inventory are new chemicals
  - TSCA definition based on molecular identity, not on other properties
  - Examples are fullerenes and carbon nanotubes
- NMs on the TSCA inventory are on the Inventory
  - Some metal oxides as an example
- EPA paper on TSCA Inventory status of NMs
- Different tools available depending on whether a chemical is “new” or “existing”.

General Approach

- Both regulatory and voluntary components
- Regulatory:
  - New Chemicals Program
  - Issue targeted SNURs for specific NMs or categories where there is evidence of
    - Risk concerns
    - Significant exposure/release potential
  - Section 4 Test Rule
  - Information gathering
    - Section 8(a) – report use and exposure data
    - Section 8(d) – report health and safety studies
    - Section 8(e) – report substantial risk info

Nanoscale Materials Stewardship Program (NMSP)

- Complements regulatory approach
- Increases experience with risk assessment/ mitigation
- Provides insight on test data to be developed
- Generation of test data to provide sound scientific basis for decision-making
- Encourages risk management practices

NMSP

- EPA announced program on January 28
- Designed for participants who already manufacture, process, use, or import NMs
- Researchers or PMN submitters may also participate
- Did not attempt to limit or define participants or nanoscale materials
- Permit submitted data to be claimed confidential but encourage as much public data as possible

Basic Program

- During the first 6 months participants report existing information – reporting deadline 7/28/08
- Encourage use of optional data submission form but may provide in any format.
- Report physical and chemical properties, hazard, exposure, use, and risk management practices or plans.
- Encourages participants who do not have a risk management plan to consider developing one and submitting it

In-Depth Program

- Sponsors would develop data on a smaller set of representative nanoscale materials
- Entities or consortia with an interest in developing data should notify EPA.
- EPA will facilitate data development process
- EPA will begin in-depth follow-up with interested participants through a public meeting

http://www.epa.gov/oppt/nano/nano-contact.htm

Outreach

- Strategy to encourage early and active participation in the basic program
- Outreach sessions and meetings with stakeholders during the first six months
- Major trade associations have alerted membership and encouraged participation
- Meeting with groups of smaller companies with the help of EPA regional offices

NMSP Submissions

- *Submitted under the Basic Program (13 companies covering 83 nanoscale materials)*
  - BASF Corporation
  - DuPont
  - General Electric
  - Nanofilm
  - Nanophase Technologies Corporation
  - Nantero
  - Office ZPI
  - PPG Industries
  - Quantum Sphere
  - Strem Chemicals
  - Swan Chemicals Inc.
  - Unidym
  - One company claimed as Confidential Business Information

NMSP Commitments

- *Commitments to Submit Information under Basic Program (17)*
  - Angstron Material
  - Arkema
  - Bayer Material Science
  - Dow Chemical
  - eSpin Technologies
  - Evident Technologies
  - Evonik/Degussa
  - International Carbon Black Association
  - Luna Nanoworks
  - Nanocyl North America
  - Pressure Chemical
  - Sabic Plastic Innovations
  - Sasol North America
  - Showa Denko KK
  - SouthWest NanoTechnologies, Inc.
  - Synthetic Amorphous Silica and Silicate Industry Association
  - One company claimed as Confidential Business Information

NMSP Commitments

- *Commitments to Participate in the In-depth Program (3)*
  - SouthWest NanoTechnologies, Inc.
  - Swan Chemicals Inc.
  - Unidym

Evaluation

- Will compare number and breadth of basic program submissions with available web information on nanotech companies and products
- Interim report approximately one year from initiation based on first six months reporting
- Detailed report and program evaluation in approximately two years

Future Steps

- Determine future direction of NMSP at two-year evaluation
- May adjust or decide future steps earlier if experience or data warrant
- Includes considering use of regulatory authorities under TSCA
- Section 8 rules for information gathering
- Section 4 rules for data development